



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/083,455

02/26/2002

Charles P. Resor

43079/31062

6439

29493 7590 04/04/2007
HUSCH & EPPENBERGER, LLC
190 CARONDELET PLAZA
SUITE 600
ST. LOUIS, MO 63105-3441

EXAMINER

LEE, BENJAMIN WILLIAM

ART UNIT

PAPER NUMBER

3714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

04/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

ED

Office Action Summary

Application No.

10/083,455

Applicant(s)

RESOR, CHARLES P.

Examiner

Benjamin W. Lee

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) 22-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 05/04/2006 has been entered. Claims 1-16 and 18-26 are pending in the application. Claims 22-26 are withdrawn from consideration.

Election/Restrictions

2. Applicant's election without traverse of claims 1-16 and 18-21 in the reply filed on 05/04/2006 is acknowledged.

Specification

3. The abstract of the disclosure is objected to because of the inclusion of the legal phraseology "means" in line 6. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Cameron et al. (US 5,632,624).

Art Unit: 3714

Re claim 8: Cameron et al. discloses an electronic learning aid comprising a memory/ROM 60 for storing questions/question texts 64 for presentation to a user (see Figs. 2 and 3; col. 3, lines 1-23), a question engine/test mode for selecting and communicating to the user a plurality of questions from the questions stored in memory (see Fig. 7; col. 4, lines 54-62), an input device/buttons 18-24 for enabling the user to answer each question communicated to the user by the question engine (see col. 4, lines 59-61), a scorer for generating an evaluative score for a set of questions communicated by the question engine, the score being determined by how well the user answered the questions constituting the set by means of the input device (see col. 5, lines 24-27), a score-communication device/display 16 for communicating the evaluative score to the (see Fig. 1; col. 5, lines 24-27), a missed-questions memory for storing a predetermined plurality of questions that, during any of a plurality for sets of questions, were answered incorrectly or were not answered within a per-question time limit (see ref. no. S 250 in Fig. 7; col. 5, lines 27-29), and the electronic learning aid functioning without an external source of electricity and being a stand-alone unit (see col. 1, lines 55-61). Although Cameron et al. is silent with respect to the electronic learning aid weighing less than one kilogram, it is inherent since the unit is designed to be handheld (see col. 6, line 16).

Re claim 10: The teachings of Cameron et al. as applied to claim 8 above have been discussed. Cameron et al. further discloses, in response to input, the question engine can, from the same group of questions stored in the missed-questions memory, develop and communicate to the user a plurality of scored sets of questions (see ref. no. S 250 in Fig. 7; col. 5, lines 27-29).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al.

The teachings of Cameron et al. as applied to claim 8 and 10 above have been discussed.

However, the teachings of Cameron et al. fail to disclose the missed-questions memory discontinues storing a question when necessary for storing therein a question more recently communicated by the question engine.

Official Notice is taken that both the concept and the advantages of only storing the most recent results for a set of chronologically ordered data are well known and expected in the art. The most recent results are most important in determining trends and current progress. A user is more likely to benefit from learning from recent mistakes rather than older mistakes which they may have already learned from or forgotten. Furthermore, it is well known in the art that portable and handheld devices may have limited amounts of memory and that older results will be deleted in favor of recent results.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic study guide of Cameron et al. as modified by Thomas such that the missed-question memory discontinues storing a question when necessary

Art Unit: 3714

for storing a question more recently communicated by the question engine in order to reduce the cost of machine by using less memory.

8. Claims 1-7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. in view of Thomas (US 5,618,182).

Re claim 1: Cameron et al. discloses an electronic learning aid comprising a memory/ROM 60 for storing questions/question texts 64 for presentation to a user (see Figs. 2 and 3; col. 3, lines 1-23), a question engine/test mode for selecting and communicating to the user a plurality of questions from the questions stored in memory (see Fig. 7; col. 4, lines 54-62), an input device/buttons 18-24 for enabling the user to answer each question communicated to the user by the question engine (see col. 4, lines 59-61), a scorer for generating an evaluative score for a set of questions communicated by the question engine, the score being determined by how well the user answered the questions constituting the set by means of the input device (see col. 5, lines 24-27), a score memory/RAM 46 for storing a score generated by the scorer and information relating to the score/total answered questions (see Fig. 2; col. 5, lines 24-27), a display 16 for displaying visually, in response to an input, the evaluative score stored in the score memory simultaneously with information relating to the score (see Fig. 1; col. 5, lines 24-27), and the electronic learning aid functioning without an external source of electricity and being a stand-alone unit (see col. 1, lines 55-61). Although Cameron et al. is silent with respect to the electronic learning aid weighing less than one kilogram, it is inherent since the unit is designed to be handheld (see col. 6, line 16).

Art Unit: 3714

However, Cameron et al. fails to disclose the score memory storing a predetermined *plurality* of evaluative scores.

Thomas teaches a computerized learning approach that monitors the performance of a user on a plurality of multiple choice exams. The percentage of correctness of a user is saved and is displayed to the user (see Fig. 5b; col. 7, lines 15-36).

Therefore, in view of Thomas, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the performance monitoring of Thomas to the electronic learning aid of Cameron et al. in order to allow the user to see how his/her performance is improving (see Thomas, col. 7, lines 37-38).

Re claim 4: The teachings of Cameron et al. as modified by Thomas as applied to claim 1 above have been discussed.

However, the teachings of Cameron et al. as modified by Thomas fail to disclose the score memory discontinues storing an evaluative score for a set of questions when necessary for storing therein an evaluative score for a more recent set of questions.

Official Notice is taken that both the concept and the advantages of only storing the most recent results for a set of chronologically ordered data are well known and expected in the art. The most recent results are most important in determining trends and current progress. A user is more interested in recent results than older results since the user will be able to better predict future performance. Furthermore, it is well known in the art that portable and handheld devices may have limited amounts of memory and that older results will be deleted in favor of recent results.

Art Unit: 3714

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic study guide of Cameron et al. as modified by Thomas such that the score memory discontinues storing an evaluative score for a set of questions when necessary for storing therein an evaluative score for a more recent set of questions in order to reduce the cost of machine by using less memory.

Re claims 2 and 5: The teachings of Cameron et al. as modified by Thomas as applied to claims 1 and 4 above have been discussed.

Thomas does not teach displaying evaluative scores and related information one score at a time. Thomas teaches displaying the evaluative scores in a table or graph. Applicant has not disclosed that displaying the scores one at a time solves any stated problem or is for any particular purpose. Moreover, it appears the electronic study guide of Cameron et al. as modified by Thomas would perform equally well when displaying multiple evaluative scores at once.

Accordingly, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have further modified the teachings of Cameron et al. as modified by Thomas such that the display displays evaluative scores and related information one score at a time because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the teachings of Cameron et al. as modified by Thomas.

Re claims 3, 6, and 7: The teachings of Cameron et al. as modified by Thomas as applied to claims 2, 4, and 5 above have been discussed. Cameron et al. further discloses an on/off

Art Unit: 3714

switch 52 (see Fig. 2; col. 2, lines 55-56). Thomas teaches storing results in a non-volatile memory (i.e. diskette and tape), which by its very nature is not erased when the system is turned off (see col. 3, lines 62-66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to store any data in non-volatile memory in order to retain stored information even when not powered.

Re claim 18: The teachings of Cameron et al. as modified by Thomas as applied to claim 7 above have been discussed. Cameron et al. further discloses a missed-questions memory for storing a predetermined plurality of questions that, during any of a plurality for sets of questions, were answered incorrectly or were not answered within a per-question time limit (see ref. no. S 250 in Fig. 7; col. 5, lines 27-29) and in conjunction with the missed-questions memory and in response to input, the question engine can, from the same group of questions stored in the missed-questions memory, develop and communicate to the user a plurality of scored sets of questions (see ref. no. S 250 in Fig. 7; col. 5, lines 27-29).

However, the teachings of Cameron et al. as modified by Thomas fail to disclose the missed-questions memory discontinues storing a question when necessary for storing therein a question more recently communicated by the question engine.

Official Notice is taken that both the concept and the advantages of only storing the most recent results for a set of chronologically ordered data are well known and expected in the art. The most recent results are most important in determining trends and current progress. A user is more likely to benefit from learning from recent mistakes rather than older mistakes which they may have already learned from or forgotten. Furthermore, it is well known in the art that

Art Unit: 3714

portable and handheld devices may have limited amounts of memory and that older results will be deleted in favor of recent results.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic study guide of Cameron et al. as modified by Thomas such that the missed-question memory discontinues storing a question when necessary for storing a question more recently communicated by the question engine in order to reduce the cost of machine by using less memory.

9. Claims 12-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. in view of Hardy et al. (US 5,203,705).

Re claims 12-15: The teachings of Cameron et al. as applied to claims 8, 9, 10, and 11 above have been discussed.

However, Cameron et al. fails to teach the missed-questions memory continues to store questions even when the learning aid is in a main-power-off state.

Hardy et al. teaches a word spelling and definition educational device. The word spelling device allows a user to create a personal user list of words (see Fig. 2; col. 4, line 58 - col. 5, line 29). The device allows a user to play several spelling games. When a user plays a word incorrectly, the incorrectly played word is marked in the user's list. After the game is complete, a list of previously incorrectly played words is generated. The device checks for previous incorrect plays, implying that the device stores missed-questions when powered off (see Fig. 4; col. 7, lines 11-67).

Therefore, in view of Hardy et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the feature storing questions in missed-question memory when the device is powered-off in order to allow a user to focus on his/her most recent mistakes immediately after the device is powered on.

Re claim 20: The teachings of Cameron et al. in view of Hardy et al. as applied to claim 15 above have been discussed. Hardy et al. further discloses the question engine communicates questions to the user one question/word at a time (see col. 5, line 50 - col. 6, line 32) and a question probability selector operably associated with the question engine and arranged to allow a user to select one of a plurality of question-probability settings, such that when a setting is selected and the question engine is communicating questions, everything else begin equal: (a) each question has a predetermined probability of being the next question communicated, (b) the predetermined probability is equal to or greater than zero percent and less than or equal to one hundred percent, (c) the probability of a question with a predetermined probability greater than zero percent can differ from the probability of a different question greater than zero percent; and (d) the probability of a question with a percent probability greater than zero percent can differ from a greater-than-zero-percent probability of the same question when a different one of said settings is disclosed. Hardy et al. teaches a word spelling and definition educational device. The word spelling device allows a user to create a personal user list of words (see Fig. 2; col. 4, line 58 - col. 5, line 29). The device allows a user to play several spelling games. When a user plays a word incorrectly, the incorrectly played word is marked in the user's list. After the game is complete, a list of previously incorrectly played words is generated (see Fig. 4; col. 7, lines 11-

Art Unit: 3714

67). Questions that are repeatedly missed by a user are more likely to be presented to the user more frequently (see col. 6, lines 45-49). Therefore, the user sets the probability of the question engine communicating questions when they get a question right or wrong. The device keeps a count for time word is played incorrectly (see ref. nos. 45-48 in Fig. 4). The probability of a question being selected is based on a weighted, quasi-random scheme (see Fig. 5; col. 7, line 66 - col. 8, line 50). A question with a non-zero probability may differ from another question with a non-zero probability since each word has an individual count. A question with a non-zero probability has various non-zero probabilities since its individual count/weighting may change. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the user list and weighted, quasi-random question selection scheme of Hardy et al. to the electronic study guide of Cameron et al. in order to customize the device to the user's needs and weaknesses.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardy et al.

Hardy et al. discloses an electronic learning aid comprising a question engine for selecting and communicating to a user a plurality of questions, one question/word at a time (see col. 5, line 50 - col. 6, line 32) and a question probability selector operably associated with the question engine and arranged to allow a user to select one of a plurality of question-probability settings, such that when a setting is selected and the question engine is communicating questions, everything else begin equal: (a) each question has a predetermined probability of being the next question communicated, (b) the predetermined probability is equal to or greater than zero percent and less than or equal to one hundred percent, (c) the probability of a question with a

Art Unit: 3714

predetermined probability greater than zero percent can differ from the probability of a different question greater than zero percent; and (d) the probability of a question with a percent probability greater than zero percent can differ from a greater-than-zero-percent probability of the same question when a different one of said settings is disclosed. Hardy et al. teaches a word spelling and definition educational device. The word spelling device allows a user to create a personal user list of words (see Fig. 2; col. 4, line 58 - col. 5, line 29). The device allows a user to play several spelling games. When a user plays a word incorrectly, the incorrectly played word is marked in the user's list. After the game is complete, a list of previously incorrectly played words is generated (see Fig. 4; col. 7, lines 11-67). Questions that are repeatedly missed by a user are more likely to be presented to the user more frequently (see col. 6, lines 45-49). Therefore, the user sets the probability of the question engine communicating questions when they get a question right or wrong. The device keeps a count for time word is played incorrectly (see ref. nos. 45-48 in Fig. 4). The probability of a question being selected is based on a weighted, quasi-random scheme (see Fig. 5; col. 7, line 66 - col. 8, line 50). A question with a non-zero probability may differ from another question with a non-zero probability since each word has an individual count. A question with a non-zero probability has various non-zero probabilities since its individual count/weighting may change.

However, Hardy et al. fails to explicitly teach the electronic learning aid weighing less than one kilogram, functioning without an external source of electricity, and being a stand-alone unit.

Official Notice is taken that both the concept and advantages of stand-alone portable devices that weigh less than one kilogram and function without an external source of electricity

Art Unit: 3714

(i.e. use a battery) are well known and expected in the art. Furthermore, Hardy et al. suggests that the invention is hand held and portable (see col. 1, lines 51-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the spelling aid of Hardy et al. less than one kilogram, function without an external source of electricity, and stand alone in order to make the invention easier to transport.

11. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. as modified by Thomas as applied to claim 7 and 18 above, and further in view of Hardy et al.

The teachings of Cameron et al. as modified by Thomas as applied to claim 7 and 18 above have been discussed. Cameron et al. further discloses the question engine communicates questions to the user one question at a time (see Fig. 7; col. 4, lines 54-62)

However, the teachings of Cameron et al. as modified by Thomas fail to disclose a question probability selector operably associated with the question engine and arranged to allow a user to select one of a plurality of question-probability settings, such that when a setting is selected and the question engine is communicating questions, everything else begin equal: (a) each question has a predetermined probability of being the next question communicated, (b) the predetermined probability is equal to or greater than zero percent and less than or equal to one hundred percent, (c) the probability of a question with a predetermined probability greater than zero percent can differ from the probability of a different question greater than zero percent; and (d) the probability of a question with a percent probability greater than zero percent can differ

Art Unit: 3714

from a greater-than-zero-percent probability of the same question when a different one of said settings is disclosed.

Hardy et al. teaches a word spelling and definition educational device. The word spelling device allows a user to create a personal user list of words (see Fig. 2; col. 4, line 58 - col. 5, line 29). The device allows a user to play several spelling games. When a user plays a word incorrectly, the incorrectly played word is marked in the user's list. After the game is complete, a list of previously incorrectly played words is generated (see Fig. 4; col. 7, lines 11-67). Questions that are repeatedly missed by a user are more likely to be presented to the user more frequently (see col. 6, lines 45-49). Therefore, the user sets the probability of the question engine communicating questions when they get a question right or wrong. The device keeps a count for time word is played incorrectly (see ref. nos. 45-48 in Fig. 4). The probability of a question being selected is based on a weighted, quasi-random scheme (see Fig. 5; col. 7, line 66 - col. 8, line 50). A question with a non-zero probability may differ from another question with a non-zero probability since each word has an individual count. A question with a non-zero probability has various non-zero probabilities since its individual count/weighting may change.

Therefore, in view of Hardy et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the user list and weighted, quasi-random question selection scheme of Hardy et al. to the electronic study guide of Cameron et al. as modified by Thomas in order to customize the device to the user's needs and weaknesses.

Art Unit: 3714

Conclusion


12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCormack et al. (US 5,139,423) discloses an electronic teaching device. Weber (US 4,247,895) discloses an arithmetic teaching apparatus.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin W. Lee whose telephone number is 571-270-1346. The examiner can normally be reached on Mon - Thurs (8:30AM-6PM), or Alt. Fri (8:30AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bwl/
Benjamin W. Lee
March 28, 2007


KATHLEEN MOSSER
PRIMARY EXAMINER